Absorption \sim STEAM Education from Queensland



The following questions are based on the contents of the session. Watch the session and answer each question.

- [1] The students conducted experiments using the scientific method. Explain the scientific method.
 - The scientific method involves four steps: starting with a question, making a prediction, carrying out an experiment, and making observations. They followed this procedure with their experiments.

[2] What happened when a sponge absorbed water?

- It expanded and got heavier.
- It didn't absorb all the water, because it has a limited absorption capability.
- It got darker as it took in water.

- [3] The students conducted an experiment with five materials: a tissue, pebbles, a tablet, plastic powder and a Styrofoam ball. Explain the results of the experiment.
 - The tissue and plastic powder absorbed water, but pebbles and the Styrofoam ball didn't. The tablet dissolved in water.
 - They conducted the experiments with five materials, using 20 mils of water for each. The tissue absorbed some water. Pebbles didn't absorb water and didn't change. The tablet didn't absorb water, but instead dissolved in water. The Styrofoam ball didn't absorb water and floated in the water. Plastic powder absorbed all the water and expanded a lot.

[4] Explain how we use absorbent materials in our everyday lives.

- Sponges are used for mopping up water and dirt.
- Sodium polyacrylate is a highly absorbent material, so it is used in baby's nappies.
- We often use tissues for wiping up spills.

[5] How do you think we could improve the experiment?

• If we had tried more materials and done more trials per material, the results would be more accurate and reliable.

Wrap up the session!

[1] The following is a summary of the session. Write down the appropriate words in the blanks in the passage. You may use the same words for several blanks.

Absorption is a (chemical) (reaction). Some materials are (absorbent) and others aren't. The students conducted experiments with various materials. The experiments were carried out using the (scientific) method), which involves four steps: starting with a (question), making (a (prediction), carrying out an (experiment), and making (observations). Among the steps, prediction was very important. They (wrote)) their predictions and (checked) them after the experiment. (down It was also important to conduct a valid test. They changed (materials), but kept using the same (amount) (of) (water) for each test. They found plastic powder was (more) (absorbent) than a tissue. They also discovered (unexpected) (things) aside from their predictions by making observations. After the experiments, they discussed how they could (improve) the experiment. Absorbent materials have great advantages and are (used) (widely) in our lives.